

Amendments to the Claims:

1. (currently amended) An abrasive free polishing formulation for removing at least a portion of a metal film, comprising an oxidizing agent and a corrosion inhibitor selected from nitrilotriacetic acid and iminodiacetic acid, said formulation having a pH in a range of from about 0.1 to 6.9.
2. (original) The abrasive free polishing formulation according to claim 1 wherein the oxidizing agent is an iodate salt.
3. (currently amended) The abrasive free polishing formulation according to claim 1, wherein the oxidizing agent is selected from the group consisting of hydrogen peroxide, potassium iodate, ferric nitrate, ammonium chlorite, ammonium chlorate, ammonium iodate, ammonium perborate, ammonium perchlorate, ammonium periodate, ammonium persulfate, tetramethylammonium chlorite, tetramethylammonium chlorate, tetramethylammonium iodate, tetramethylammonium perborate, tetramethylammonium perchlorate, tetramethylammonium periodate, tetramethylammonium persulfate, urea hydrogen peroxide, 4-methylmorpholine *N*-oxide, and pyridine *N*-oxide.
4. (canceled)
5. (canceled)
6. (canceled)
7. (canceled)
8. (canceled)
9. (original) The abrasive free polishing formulation according to claim 1, wherein the corrosion inhibitor is iminodiacetic acid.

10. (original) The abrasive free polishing formulation according to claim 1, wherein the metal film comprises copper, a copper alloy or a copper compound having copper as its principal component.
11. (original) The abrasive free polishing formulation according to claim 1, wherein the metal film comprises aluminum, an aluminum alloy or an aluminum compound having aluminum as its principal component.
12. (original) The abrasive free polishing formulation according to claim 1, wherein the metal film comprises tungsten, a tungsten alloy or a tungsten compound having tungsten as its principal component.
13. (currently amended) The abrasive free polishing formulation according to claim 12, wherein the tungsten compound is a tungsten nitride, ~~tantalum, tantalum nitride, silicon doped tantalum nitride, titanium nitride and silicon doped titanium nitride.~~
14. (original) The abrasive free polishing formulation according to claim 1, wherein the metal film is selected from the group consisting of titanium, a titanium alloy, or a titanium compound having titanium as its principal component.
15. (original) The abrasive free polishing formulation according to claim 14, wherein the titanium compound is selected from the group consisting of titanium nitride and silicon doped titanium nitride.
16. (original) The abrasive free polishing formulation according to claim 1, wherein the metal film is selected from the group consisting of tantalum, a tantalum alloy or a tantalum compound having tantalum as its principal component.
17. (original) The abrasive free polishing formulation according to claim 16, wherein the tantalum compound is selected from the group consisting of tantalum nitride and silicon doped tantalum nitride.
18. (original) The abrasive free polishing formulation according to claim 1, further comprising an activating agent.

19. (original) The abrasive free polishing formulation according to claim 18, wherein the activating agent is selected from the group consisting of inorganic and organic acids.
20. (original) The abrasive free polishing formulation according to claim 19, wherein the inorganic acid is selected from the group consisting of phosphoric acid, fluoroboric acid, and iodic acid.
21. (currently amended) The abrasive free polishing formulation according to claim 19, wherein the organic acid is selected from the group consisting of citric acid, malic acid, oxalic acid, malonic acid, acetic acid and pivalic acid.
22. (original) The abrasive free polishing formulation according to claim 1, further comprising a pH modifier in such amounts to modify the pH to a region of about 0.1 to 6.9, wherein said pH modifier is selected from the group consisting of: potassium hydroxide, sodium hydroxide, ammonium hydroxide, tetramethylammonium hydroxide, or quaternary ammonium hydroxide.
23. (original) The abrasive free polishing formulation according to claim 1, further comprising a cleaning agent.
24. (original) The abrasive free polishing formulation according to claim 23, wherein the cleaning agent is a carboxylic acid.
25. (original) The abrasive free polishing formulation according to claim 24, wherein the cleaning agent is selected from the group consisting of glycine, oxalic acid, malonic acid, succinic acid, citric acid and nitrilotriacetic acid.
26. (original) The abrasive free polishing formulation according to claim 23, wherein the cleaning agent is a dicarboxylic acid.
27. (original) The abrasive free polishing formulation according to claim 26, wherein the dicarboxylic acid has a nitrogen containing functional group.

28. (original) The abrasive free polishing formulation according to claim 26, wherein the dicarboxylic acid is iminodiacetic acid.
29. (currently amended) An abrasive free polishing formulation comprising an oxidizing agent, a corrosion inhibitor, an activating agent and a cleaning agent, wherein the corrosion inhibitor is selected from nitrilotriacetic acid and iminodiacetic acid.
30. (currently amended) The abrasive free polishing formulation according to claim ~~29~~ 30 comprising the composition:
- | | |
|------------------------|--|
| a. Oxidizing agent | 0.1 to 20 % by weight |
| b. Corrosion inhibitor | 0 <u>up</u> to 5 % by weight |
| c. Activating agent | 0 <u>up</u> to 5 % by weight |
| d. Cleaning agent | 0 <u>up</u> to 5 % by weight. |
31. (original) The abrasive free polishing slurry according to claim 30 further comprising water.
32. (currently amended) The abrasive free polishing slurry according to claim 30, further comprising a pH modifier in such amounts as to modify the pH to a region of about 0.1 to 6.9, wherein said pH modifier is selected from the group consisting of: potassium hydroxide, sodium hydroxide, ammonium hydroxide, tetramethylammonium hydroxide, or quaternary ammonium hydroxide.
33. (original) The abrasive free polishing formulation according to claim 30, wherein the cleaning agent is an inorganic acid.
34. (original) The abrasive free polishing formulation according to claim 30, wherein the corrosion inhibitor is iminodiacetic acid.
35. (original) The abrasive free polishing formulation according to claim 30, comprising the composition:
- | | |
|----------------------------|------------------|
| a. HIO_3 | 4 % by weight |
| b. IDA | 0.2 % by weight |
| c. H_3PO_4 | 0.75 % by weight |

- d. KOH 1.73 % by weight
- e. Water balance

36. (original) The abrasive free polishing formulation according to claim 30, wherein the pH of the polishing formula is in the range of from about 0.1 to 6.9.
37. (original) The abrasive free polishing formulation according to claim 30, wherein the pH of the polishing formula is about 3.5.
38. (currently amended) The polishing formulation according to claim 30, wherein the oxidizing agent is selected from the group consisting of: hydrogen peroxide, potassium iodate, ferric nitrate, ammonium chlorite, ammonium chlorate, ammonium iodate, ammonium perborate, ammonium perchlorate, ammonium periodate, ammonium persulfate, tetramethylammonium chlorite, tetramethylammonium chlorate, tetramethylammonium iodate, tetramethylammonium perborate, tetramethylammonium perchlorate, tetramethylammonium periodate, tetramethylammonium persulfate, urea hydrogen peroxide, 4-methylmorpholine *N*-oxide ($C_5H_{11}NO_2$) and pyridine *N*-oxide (C_5H_5NO).

Claims 39-75 (canceled).

76. (new) An abrasive free polishing formulation, comprising:

- a. HIO_3 4 % by weight
- b. IDA 0.2 % by weight
- c. H_3PO_4 0.75 % by weight
- d. KOH 1.73 % by weight
- e. Water balance

77. (new) An abrasive free polishing formulation for removing at least a portion of a metal film, comprising an oxidizing agent and a corrosion inhibitor said oxidizing agent being selected from the group consisting of, ammonium chlorite, ammonium chlorate, ammonium iodate, ammonium perborate, ammonium perchlorate, ammonium periodate, ammonium persulfate, tetramethylammonium chlorite, tetramethylammonium chlorate, tetramethylammonium iodate, tetramethylammonium perborate, tetramethylammonium

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perchlorate, tetramethylammonium periodate, tetramethylammonium persulfate, urea hydrogen peroxide, 4-methylmorpholine *N*-oxide, and pyridine *N*-oxide.

78. (new) An abrasive free polishing formulation for removing at least a portion of a metal film, comprising an amine *N*-oxide, oxidizing agent and a corrosion inhibitor.
79. (new) The abrasive free polishing formulation according to claim 78, wherein said oxidizing agent comprises the formula $(R_1R_2R_3N \rightarrow O)$, wherein $R_1R_2R_3$ are independently selected from the group consisting of: H and C_1 - C_8 alkyl.